APPENDIX 3.0

CONCRETE ELEMENTS

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ADDITIONAL INFO - CONCRETE ELEMENTS

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1.0 CONCRETE ELEMENTS





1.1 WHAT IS CONSENTED?

The planning consent identifies several areas of concrete canopies.

These are primarily at main core entrances or private residential entrance doors to town houses / duplexes. In the planning document they are labelled as 'concrete fascia/canopy'.

The section markers shown relate to diagrams on the next page.

Extract from original consent drawing 126_1503



1.

1.

2.

(3.

Typical planning floor zone Zone where canopy is shown on planning drawings

2.

First floor \/ Stair/well Canopy height 600mm min 3.

1.2 THE DESIGN PRINCIPLE

in the drawing to the far left (1.).

WHY CAN'T WE PROVIDE THIS? 1.3

There are two main reasons we can't simply extend the slab outwards.

The first is related to energy loss. In modern buildings it is not permitted to continue elements from inside, within the insulated zone, to outside. This is to limit the ability of the warm floor slab to radiate heat into the atmosphere. This could be overcome with the use of thermal break connectors. However, this is not possible, due to the proposed arrangement of the concrete elements, as

illustrated in adjacent diagrams.

At the residential core entrances, the canopy is set considerably below the floor slab.

At the private residential door entrances, the door sits in front of the stair at a half level, meaning there is no slab behind the wall to fix.

The principle is to replicate traditional warehouse buildings but to modern standards

However, the alignment shown in the consent does not allow this simple approach as some canopies are shown lower than the floor slabs

In some places, such as the town houses, there is no slab to extend as the canopy sits in front of stairwell.

From our last conversation, the principle behind the design is to mimic industrial buildings with concrete frames to evoke the history of the site as a light industrial building.

In those buildings the canopies are typically formed as a simple extension of the slab as illustrated



Significant extra steelwork would be needed here to connect the canopy back to the slab above and there would be significant extra load on the underside of the brick support angle

Here, a 600mm minimum canopy is required for life time homes purposes. A solid concrete canopy of this size would be very difficult to support with no slab to connect to.

AN ISSUE OF WEIGHT? 1.4

precedent - the canopies cannot be a simple extension of the slab.

'real life' build ups.

extends out of the building.

In the case of the town house structure, it may simply not be possible to provide a steel frame that sits within the wall build up and can hold up a mass of concrete of the size required.

- It is established that the canopies do not work in the same way as the design from which they take
- What this means is that they must be supported separately from the slabs.
- The drawings here show the relationships of the concrete masses proposed in the consent to the

In each case, significant secondary supports would be needed to support the pretence that the slab



A panellised canopy in Hackney



Fibre cement cladding panels

1.5 AN ALTERNATIVE APPROACH

Instead of using solid concrete or concrete panels, a lighter weight material should be used.

As we have shown earlier, the primary structure cannot extend out to create the features, so secondary steel structure will be needed. A lighter weight approach significantly reduces the amount of secondary steel needed.

primary component of concrete.

To the left are examples of this product used as a canopy and also separately as cladding.

Our proposal is to use fibre cement panels, a dense cladding panel which has a very similar appearance to concrete which is composed, as the name suggests, of cement which is of course a





Communal canopy, view from below

(1.



'Moulded' Corners are possible in fibre cement, so the leading edge of each detail will be formed from a U shaped piece to give the impression of mass.

The soffit will be panellised to the ty shown on the previous page.

The panellised nature of the design also allows proper waterproofing to be provided from folded aluminium plates above the canopies where appropriate.

In the case of the communal entranc canopy in place beneath the soffit.

In the case of the town house canopy which cantilevers further, a steel frame will provide structure. With this lighter weight material it should be possible to conceal the steelwork within the wall build up.









The soffit will be panellised to the typical sizes of the fibre cement panels, similarly to the example

In the case of the communal entrances, a simple 'unistrut' metal framing should be able to hold the





Area of concrete to be replaced with brick

Area of concrete to be replaced with metal cladding

1.7 OTHER AREAS OF CONCRETE

In other areas of the design we are also seeking to omit concrete cladding.

In the area to the rear of the duplexes facing the Birkenhead Estate we feel concrete or fibre cement cladding adds an unnecessary level of complexity to the design of the cladding by adding in difficult flashing details between materials. It is also not viewed from anywhere in the public realm and may not even be clearly visible from the back yards of the homes themselves due to the narrowness of the lightwell.

It will be replaced with brickwork.

For further information on the areas of concrete within the elevation, please refer to elevation drawings 1_529-A-PL-550.

We have prepared a separate document regarding the changes to the office layout that have changed the design of the elevation there. Because of the design changes to that area we also seek to omit concrete fascia cladding in that area.

It will be replaced by metal cladding to match the metal cladding elsewhere in the scheme.

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